

Two Tower Center Blvd.
10th Floor
East Brunswick, New Jersey 08816

CHEMICAL LAND HOLDINGS, INC.
U.S. EPA. REGION II

2000 OCT 23 AM 10:18
October 19, 2000
ORC-IMMED. OFFICE

U.S. Environmental Protection Agency, Region II
Emergency and Remedial Response Division
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866

Attention: Ms. Janet Conetta
Strategic Integration Manager

Subject: Identification of Surface Water Data Gap
Passaic River Study Area
Administrative Order on Consent Index No. II-CERCLA-0117

Dear Ms. Conetta:

As directed at by the US Environmental Protection Agency (EPA) at the Risk Assessment Kickoff Meeting held on July 19, 2000, Chemical Land Holdings, Inc. (CLH) has initiated preparation of the first interim deliverables for both the Human Health Risk Assessment (HHRA) and the Ecological Risk Assessment (ERA). For the HHRA, the first interim deliverable consists of the preparation of Tables 1 and 4 as described in "Risk Assessment Guidance for Superfund: Volume 1 - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments)" prepared by the United States Environmental Protection Agency (USEPA, 1998). Table 1 of this deliverable identifies the exposure pathways relevant to the site and Table 4 identifies the exposure assessment equations and input variables to be utilized during the conduct of the HHRA. The second interim deliverable will include designation of the chemicals of interest (COI) and their respective chemical exposure concentrations for each pathway media. For the ERA, the first interim deliverable contains the problem formulation, which includes the selection of receptors of interest and development of a conceptual site model and risk questions, again followed by designation of COI and their respective chemical concentrations.

During development of these interim deliverables, CLH identified a gap in the site-specific data for the Passaic River Study Area (Study Area) - there are no surface water chemistry data to support evaluation of this water exposure pathway for the HHRA, nor to provide a basis for interpretation of the effect of water chemistry on upper trophic level fish and avian receptors in the ERA.

The remainder of this letter provides additional background, and proposes an approach to address this data gap. CLH requests that the Agency provide its response as soon as possible. If addressed in a timely manner, it may be possible to collect the necessary information without significant adverse impact to the project schedule.

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BACKGROUND

At the July 19, 2000 Risk Assessment Kickoff Meeting, representatives of the New Jersey Department of Environmental Protection (NJDEP) directed that CLH evaluate the human health risk associated with rowing or sculling in Study Area surface water as part of the HHRA. While the representatives of NJDEP indicated that, in their opinion, this exposure pathway is unlikely to be a "risk driver," they indicated that this pathway was of concern to certain members of the public. EPA directed CLH to include additional receptors for the surface water pathway (e.g., anglers, bank cleanup crews, construction workers). Thus, during preparation of the first interim deliverable for the HHRA, this exposure pathway was included by CLH in development of RAGS Part D, Table 1. RAGS Part D, Table 4 requires the listing of both the equation to be used to estimate exposure and the values of the input variables to be used for the various exposure pathways. Following submittal of the first interim deliverable to EPA, the second interim deliverable will include Table 2, which will require COI chemical concentrations for the surface water pathway. It was during preparation of Table 4 that this data gap was identified. Specifically, rowers, scullers, and other identified receptors may be exposed to site related chemicals via dermal contact with surface water and/or inhalation of site related chemicals originating from surface water.

As you may be aware, surface water chemistry data have not been collected during the Passaic River Study Area remedial investigations. A review of the project-related correspondence demonstrates that the collection of surface water has previously been discussed between CLH and the Agency. Most recently, CLH proposed collection of surface water samples as part of the Ecological Sampling Plan (ESP) in the Draft ESP submitted on September 17, 1996. The Agency provided comments on the surface water sampling program proposed in the draft ESP in its "comment letter" dated April 16, 1998. In a meeting between EPA and CLH on May 4, 1998, EPA decided that water column sampling would consist only of standard water quality parameters (not chemical compounds), and analysis of exposed bivalves to characterize the type of chemicals accumulated from surface water. The meeting notes are memorialized in a letter from Mr. A. Pittignano to Mr. P. Evangelista dated May 11, 1998. Attendees at this meeting included: EPA: P. Evangelista, G. Ferreira, M. Hauptman, S. Jaffess, M. Olsen, and C. Stitt; NOAA: J. Field and L. Rossman; CLH: T. Iannuzzi, A. Pittignano, D. Rabbe, and T. Wolfskill.

EPA GUIDANCE

Data to support evaluation of this pathway should be site specific and are generally collected as part of the site remedial investigation. USEPA, 1988 directs that "...the RI/FS must obtain data to define...the potential receptors and associated pathways...to determine whether, and to what extent, a threat to human health or the environment exists..." (page 2-10). And in the HHRA guidance document (USEPA, 1989, page 4-3): "Quantitative risk assessment, like site characterization, requires data on concentrations of contaminants in each of the source areas and media of concern."

POTENTIAL USES

The potential uses of surface water analytical data in the HHRA and ERA are many. The following table is a summary of the likely uses of surface water data in a HHRA and ERA that CLH has identified:

TABLE Identified Uses of Surface Water Data for Chemicals of Interest (COI) Passaic River Study Area	
HUMAN HEALTH RISK ASSESSMENT	ECOLOGICAL RISK ASSESSMENT
1. Evaluate exposure and health risk from dermal exposure for scullers, individuals rowing, visitors and workers along the riverbank and on the water.	1. Assess surface water contribution to bioaccumulation in site biota
2. Evaluate exposure and health risk from inhalation of COIs originating from surface water	2. Evaluate risk from COIs present in surface water
	3. Assist in Food Web Model Calibration for Feasibility Study

Finally, while not identified in the table above, the inclusion of surface water chemical analyses in the Remedial Investigation of the Study Area and subsequent use of such in the HHRA and ERA will lead to a more complete and thorough evaluation of the Study Area, as well as assure consistency with standard Agency guidance. It will also preclude numerous questions during the public comment periods about why this particular environmental medium was not sampled. Indeed, already the NJDEP has raised a question about an exposure pathway associated with surface water that the Agency and CLH are unable to address with the existing dataset.

CLH Recommendation

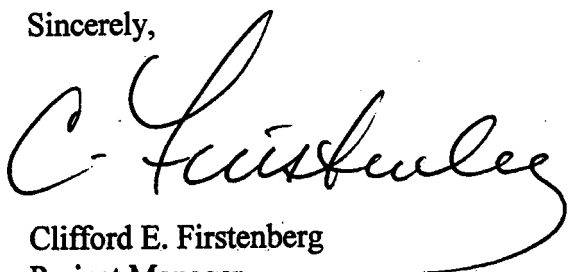
In light of the importance of surface water analytical data for the HHRA to address receptors exposed to surface water (as required at the risk meeting referenced above), and for the ERA to provide a thorough, scientifically-defensible analysis of the ecology of the Passaic River Study Area, CLH recommends the sampling and analysis of surface water for the standard suite of analytical parameters.

If Agency approval to collect water data is granted, CLH can meet with representatives of USEPA to agree upon the general scope of such an effort, and then submit for Agency approval the necessary modifications to the ESP Work Plan, such that a two-to-four season sampling

program can be implemented beginning this winter. This rapid response to address this important data gap will minimize the impact to, or possibly have no impact on, the overall project schedule. Analysis of the surface water pathway can be deferred until data are received, while the majority of the risk assessment work can continue.

I look forward to receiving a response from the Agency regarding this issue in the very near future as it is impacting our ability to submit Table 4 of the first interim deliverable (and subsequently, Table 2).

Sincerely,



Clifford E. Firstenberg
Project Manager
On behalf of Occidental Chemical Corporation
(as successor to Diamond Shamrock Chemicals Company)

2 copies sent

References

USEPA (1988). Guidance For Conducting Remedial Investigations And Feasibility Studies Under CERCLA. Washington D.C., United States Environmental Protection Agency.

USEPA (1989). Risk Assessment Guidance For Superfund Volume 1 Human Health Evaluation Manual (Part A), Interim Final. Washington, D.C., United States Environmental Protection Agency Office of Emergency and Remedial Response.

USEPA (1998). Risk Assessment Guidance For Superfund: Volume 1 - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, And Review Of Superfund Risk Assessments). Washington D.C., United States Environmental Protection Agency, Solid Waste and Emergency Response.

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2c: Section Chief
NJDEP-Bureau of Federal Case Management
401 East State Street - CN 028
Trenton, NJ 08625-0028
Attn: Jonathan D. Berg

1c: Chief, New Jersey Superfund Branch
Office of Regional Counsel
U.S. Environmental Protection Agency
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866
Attention: Diamond Alkali Site Attorney - Passaic River Study Area

